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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,628	09/19/2003	Kenji Inoue	KIN90USA	5070

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EXAMINER	
PIZIALI, ANDREW T	

ART UNIT	PAPER NUMBER
1771	

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/664,628	INOUE, KENJI	
	Examiner	Art Unit	
	Andrew T. Piziali	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5 and 7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,5 and 7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed on 9/1/2005 has been entered. The examiner has withdrawn the rejections of claims 2 ,4 6 and 8-12 based on the cancellation of claims 2, 4, 6 and 8-12.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 3, 5 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims refer to a "high molecular weight elastic section" but neither the claims nor the specification define what is considered "high."

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,383,339 to Gstrein in view of USPN 6,605,188 to Hagfors in view of any one of USPN 4,500,588 to Lundstrom or USPN 4,529,643 to Lundstrom.

Regarding claims 1 and 5, Gstrein discloses a wet paper web transfer belt comprising a

base body, a wet paper web side layer having a wet paper web-contacting surface, and a machine side layer, said belt having fibers, parts of which are embedded and protrude from said web-contacting surface (see entire document including column 1, lines 39-67 and Figures 1-4).

Gstrein is silent with regards to specific fiber lengths, therefore, it would have been obvious to look to the prior art for conventional fiber lengths. Hagfors provides this conventional teaching showing that it is known in the papermaking belt art to use fibers with an average protruding length of between 0.01 to 3 mm (column 4, lines 17-40). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the fibers protrude between 0.01 to 3 mm motivated by the expectation of successfully practicing the invention of Gstrein.

Gstrein discloses that a variety of polymers may be used to create the polymer layer (column 2, lines 4-6), but Gstrein does not specifically mention the use of a high molecular weight elastic polymer. The Lundstrom references ('588 and '643) each disclose that it is known in the papermaking art to use an elastomeric polymer material because some applications require a higher compressibility (see entire documents including column 3, lines 17-25 of '643 and column 3, lines 57-65 of '588). Considering that the Lundstrom references specifically mention polyurethane, while the Examples of the current specification specifically use polyurethane, it appears that the prior art teaches and/or suggests the use of a high molecular weight elastic material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the polymer layer from any suitable polymeric material, such as a high molecular weight elastic polymer, because some applications require a higher

compressibility and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability.

Regarding claim 5, Gstrein discloses that the protruding parts of the fibers are formed by processing (needling) the surface of the fabric (column 4, lines 57-60).

6. Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,383,339 to Gstrein in view of USPN 6,605,188 to Hagfors in view of any one of USPN 4,500,588 to Lundstrom or USPN 4,529,643 to Lundstrom as applied to claims 1 and 5 above, and further in view of USPN 5,849,395 to Valentine et al. (hereinafter referred to as Valentine).

Regarding claims 3 and 7, Gstrein is silent with regards to specific fiber densities, therefore, it would have been necessary and thus obvious to look to the prior art for conventional fiber densities. Valentine provides this conventional teaching showing that it is known in the papermaking art to use high fiber densities to reduce brittleness (see entire document including the paragraph bridging columns 1 and 2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the fiber density high, such as from 10 to 500,000 fibers/cm^2, motivated by the expectation of successfully practicing the invention of Gstrein and/or to reduce brittleness.

Regarding claim 7, Gstrein discloses that the protruding parts of the fibers are formed by processing (needling) the surface of the fabric (column 4, lines 57-60).

7. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,605,188 to Hagfors in view of any one of USPN 4,500,588 to Lundstrom or USPN 4,529,643 to Lundstrom.

Regarding claims 1 and 5, Hagfors discloses a wet paper web transfer belt comprising a

base body, a wet paper web side layer having a wet paper web-contacting surface, and a machine side layer, said belt having fibers, parts of which are embedded and protrude from said web-contacting surface (see entire document including column 2, lines 23-53 and Figure 1). Hagfors discloses that the fibers may have an average protruding length of between 0.01 to 3 mm (column 4, lines 17-40).

Hagfors discloses that a variety of polymers may be used to create the polymer layer, including polyurethane (column 3, lines 21-25), but Hagfors does not specifically mention the use of a high molecular weight elastic polymer. The Lundstrom references ('588 and '643) each disclose that it is known in the papermaking art to use an elastomeric polymer material because some applications require a higher compressibility (see entire documents including column 3, lines 17-25 of '643 and column 3, lines 57-65 of '588). Considering that the Lundstrom references and Hagfors each mention polyurethane, while the Examples of the current specification specifically use polyurethane, it appears that the prior art teaches and/or suggests the use of a high molecular weight elastic material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the polymer layer from any suitable polymeric material, such as a high molecular weight elastic polymer, because some applications require a higher compressibility and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability.

Regarding claim 5, Hagfors discloses that the protruding parts of the fibers are formed by processing (grounding) the surface of the fabric (column 1, lines 57-67).

8. Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,605,188 to Hagfors in view of any one of USPN 4,500,588 to Lundstrom or USPN 4,529,643 to Lundstrom as applied to claims 1 and 5 above, and further in view of USPN 5,849,395 to Valentine.

Regarding claims 3 and 7, Hagfors is silent with regards to specific fiber densities, therefore, it would have been necessary and thus obvious to look to the prior art for conventional fiber densities. Valentine provides this conventional teaching showing that it is known in the papermaking art to use high fiber densities to reduce brittleness (see entire document including the paragraph bridging columns 1 and 2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the fiber density high, such as from 10 to 500,000 fibers/cm^2, motivated by the expectation of successfully practicing the invention of Hagfors and/or to reduce brittleness.

Regarding claim 7, Hagfors discloses that the protruding parts of the fibers are formed by processing (grounding) the surface of the fabric (column 1, lines 57-67).

Response to Arguments

9. Applicant's arguments filed 9/1/2005 have been fully considered but they are not persuasive.

The applicant argues that the 35 USC 112 rejection should be withdrawn because some patents have the phrase "high molecular weight" within the claims. The examiner contends that regardless of whether or not the cited patents clearly claimed their invention, it is clear that neither the current claims nor the current specification define what is considered "high." The

applicant has failed to show that the phrase "high molecular weight" is a term of the art that is universally defined and/or disclose what molecular weights read on the claimed limitation.

The applicant asserts that the exposed nonwoven fibers of Gstrein overlie the underlying polymer fiber structure and that they are not embedded in the underlying layer. The examiner respectfully disagrees. Gstrein discloses that the exposed nonwoven fibers are "needled" to the underlying layer (column 4, lines 57-60). As is defined in the cited textile glossary, in nonwoven fabric manufacture the process of needling comprises the process of punching fibers vertically through the underlying web.

The applicant asserts that Hagfors describes a belt in which the embedded fibers are exposed at the surface of the underlying polymer layer, but that Hagfors does not teach or suggest that the fibers extend past the surface. The examiner respectfully disagrees. Hagfors clearly illustrates the fibers extending past the surface (see Figure 1). In addition, Hagfors grounds the surface of the layer to expose the fibers (column 1, lines 64-67), which is the identical method used by the current application to product the claimed exposed fibers (see page 10, last 3 lines). Therefore, since the method taught by the current specification produces protruding fibers the identical method taught by Hagfors should produce exposed fibers.

The applicant asserts that Hagfors does not teach or suggest the claimed protruding fiber length. The examiner respectfully disagrees. Hagfors discloses that a test of the surface showed that the belt roughness may be between 0.01 and 3 mm (column 4, lines 25-27). Considering that the protruding fibers illustrated in Figure 1 would overwhelmingly dictate this roughness value (Figure 1 does not illustrate any other roughness dictating factor), it appears that Hagfors teaches, at least strongly suggests, that the fibers have the claimed protruding fiber length.

Conclusion

10. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Piziali whose telephone number is (571) 272-1541. The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

atp

9/22/05

ANDREW T. PIZIALI
TENT EXAMINER

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